The system will exit ready mode if a door, the hood or the trunk is opened, if the brake pedal is pressed, if the parking brake is disengaged or if the ignition key is turned to the Ignition On (Run) position.

- ❑ **Remote-start the engine and listen for starter drag.** If the starter cranks for too long, carry out another tach programming procedure.
- ❑ **Hood switch shutdown.** With the vehicle running under the remote car starter, open the hood; the vehicle should shut down. If it does not shut down, check the hood pin-switch and its connector.
- ❑ **Brakes shutdown circuit.** With the vehicle running under the remote car starter, press and release the brake pedal. The engine should shut down immediately. If it continues to run, check the brakes switch connection.
- ❑ **Parking brake shutdown circuit.** With the vehicle running under remote start, disengage the parking brake. The engine should shut down immediately. If the engine continues to run, check the parking brake switch connection.
- ❑ **OEM alarm control.** Make sure the module is able to arm and disarm the oem alarm (if applicable).
- ❑ **Door locks and trunk testing.** Make sure each of these options respond to the transmitter (if installed).
- ❑ **Door pin shutdown circuit.** Make sure the system exits ready mode when each door is opened. (Test each door.)
- ❑ **Starter kill option.** Sit inside the vehicle with all doors closed. Arm the vehicle, then try to start the engine with the key. The engine should not start. If the engine starts, rewire the starter kill to reach proper operation.
- ❑ **Valet mode.** Make sure the remote car starter is able to properly enter and exit valet mode. When setting the remote car starter into valet mode, pressing the lock button will lock the doors without activating the starter kill. (Refer to the user guide for further information on valet mode.)
- ❑ **Idle mode.** Make sure the vehicle properly enters and exits idle mode.
- ❑ **Door and Trunk trigger.** Make sure that when the system is armed, opening any door or opening the trunk will trigger the alarm (if installed).
- ❑ **Hood trigger.** Make sure that when the system is armed, opening the hood will trigger the alarm.
- ❑ **Shock and warn-away trigger.** Make sure that the shock works well and is not too sensitive so that it unnecessarily triggers the alarm.
- ❑ **Most comebacks are the result of misunderstandings about how a product works or performs. Take the time to properly explain all functions and features to the customers before they leave the premises. Doing this will save time and money.**

Diagnostics – Parking Light Flash Table

Diagnostic table for shutdown.

Parking lights flashes	Cause
1	• Runtime has expired.
2	• Shutdown by remote. • Ready mode is activated.
3	• Failed start.
4	• Brake shutdown.
10	• Hood shutdown.
Flash for 30sec	• Panic mode
Flash for 60sec	• Alarm triggered

Diagnostic table for start failure.

Parking lights flashes	Cause
1 (Manual transmission only)	• Ready mode is not activated. • Tach signal is not learned.
1 slow ➔ 2 quick	• The system is set to valet mode.
3 (Automatic transmission only)	• The parking brake is active. • Yellow loop is connected.
4	• Brake wire is active
6	• A tach signal is detected before Ignition.
10	• Hood wire is active.

Note: The installer can also use the PRG-1000 to diagnose shutdown and remote start failures. Refer to the PRG-1000 manual guide.

AS-1757

Quick Installation Guide

(For a copy of the install guide visit http://www.autostart.ca)

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Entering Programming Mode

Using the Hood Pin
• Press and hold the hood pin for 4 seconds.
• Release the hood pin. **The parking lights will turn ON.**
• While the parking lights are **ON**, press the hood pin once more and release immediately. **The parking lights will turn ON and stay ON for 20 seconds.**
• **You now have 20 seconds to select one of the sub-menus.**
Note: To exit programming mode, close the hood.

Manual or Automatic Transmission

This module may be installed on vehicles with manual or automatic transmissions. It is originally configured for manual transmissions. If the vehicle you are working on is automatic, it is mandatory to make a few quick and easy modifications before the unit is connected. **In the event that the configuration requires changes afterwards, a complete reset will be necessary before those changes become effective.**

To install this unit in a vehicle with a manual transmission:

- Make sure the **Yellow** loop on the PC board is connected.
- Connect the **Orange** handbrake wire located on the 12-pin harness to the vehicle handbrake switch.
- Connect the **Blue/White** (+) door input **OR** the **Grey** (-) door input wire located on the 12-pin harness to the vehicle door pin wire, which monitors all the doors of the vehicle (only use 1 of the 2 door trigger inputs).
- Make sure the **Purple** TACH wire is plugged in – the TACH wire **MUST** be hooked up when the module is set for a manual transmission.
- Make all your regular connections.
- Power up the unit by first inserting the 5-pin connector, then the 6-pin connector and finally the 12-pin connector. The parking lights will flash **4 times**.

Notice

The manufacturer will accept no responsibility for any electrical damage resulting from improper installation of the product, be that either damage to the vehicle itself or to the unit. This unit must be installed by a certified technician using all safety devices supplied. Please note that this guide has been written for properly trained Autostart technicians: a certain level of skills and knowledge is therefore assumed. Please review the installation guide carefully before beginning any work.

Warning

Before installing the unit, if installing on a vehicle with a **manual** transmission, test that the OEM Door Switch contacts of the vehicle work well, and that the Parking Brake system operates properly. If installing on a vehicle with an **automatic** transmission, test that the vehicle does not start when the gearshift lever is in the "Drive" position. If it starts in gear, install a manual-transmission remote starter system instead.

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- When learning the transmitter, the parking lights will flash **5 times** quickly.
- **Upon the first successful remote start, the system will lock the transmission settings to manual mode.**

To install this unit in a vehicle with an automatic transmission:

1. Cut the loop on the pc board (**Yellow** wire).
2. Make sure the **Orange** handbrake wire is not connected to any of the vehicle circuits.
3. Make all the regular connections.
4. Power up the unit. The parking lights will flash **4 times**.
5. When learning the first transmitter, the parking lights will flash **5 times** quickly then give **2 slow flashes**.
6. **Upon the first successful remote start once the yellow loop has been cut, the system will lock the transmission settings to automatic mode.**

Note: If upon pressing the **START** button, the parking lights give **3 slow flashes**, make sure that the **Orange** handbrake wire is not connected and that the yellow loop is cut and isolated.

Resetting the Module

WARNING! By resetting the module, all programmed values are erased — i.e.: tach, transmitter as well as programming options. The programming options are returned to their default values.

- **Enter programming Mode** **(see p. 1).**
- Once having reached the programming mode, quickly press and release the brake pedal until the parking lights flash 8 times.

Transmitter Programming Procedure

1. **Enter programming Mode** **(see p. 1).** **—** the parking lights will stay on for up to 20 seconds.
2. Before the lights go out, turn the ignition key to the **IGNITION ON (RUN)** position and immediately to the **OFF** position.
3. Press and hold the **LOCK** button and keep it down until the siren or horn chirps twice and the parking lights flash 5 times quickly.
4. The transmitter has been stored in memory.
5. To exit: close the hood. **Note:** Each unit can store 4 remotes in its memory.

To program a transmitter on the second vehicle for multi-car operation, you must press the **TRUNK** button (instead of **LOCK** or **UNLOCK**) in step 3 of the transmitter programming procedure.

Entering Programming Options

1. **Enter programming Mode** **(see p. 1)** **—** the parking lights will stay on for up to 20 seconds.
2. Before the lights go out, press and hold the brake pedal and then press one of the following buttons. **Note:** For vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
   a. Turn the ignition ON; The parking lights will turn OFF
   b. After 4 seconds the parking lights will turn ON and then press the brake.

LOCK .....to access mode 1;
UNLOCK .....to access mode 2;
TRUNK…… ……to access mode 3;
START/STOP……to access mode 4.

The parking lights will flash and the horn or siren will chirp (if programmed) once, twice, three or four times to confirm entry into a mode.

3. Release the brake pedal.
4. Once the desired mode has been selected, the unit will fall (by default) into function #1 of that mode; you can now select the option you want in function 1. Once this option has been chosen, the unit will move on to function 2 of the mode selected, and so on.

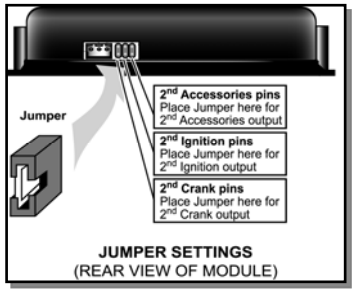
LOCK ..... for Option 1; **TRUNK** ..... for Option 3;
UNLOCK ..... for Option 2; **START/STOP** ..... for Option 4.

Programming Options

MODE 1 ** INDICATES DEFAULT SETTING*

FUNCTION 1 – Ignition-controlled door locks		
	OPTION 1*	**Ignition lock DISABLED**
	OPTION 2	Ignition lock **ENABLED**
	OPTION 3	Ignition unlock only
	OPTION 4	Ignition lock only
FUNCTION 2 – Secure Lock		
	OPTION 1*	**Secure lock DISABLED**
	OPTION 2	Standard secure lock **ENABLED**
	OPTION 3	Smart secure lock **ENABLED**
FUNCTION 3 – Starter Kill arming mode		
	OPTION 1*	**Passive arming (60 sec.)**
	OPTION 2	Active arming
	OPTION 3	Passive arming (3 min.)
FUNCTION 4 – Door lock/unlock pulse timing		
	OPTION 1*	**7/10-sec. lock/unlock pulses**
	OPTION 2	4-sec. lock/unlock pulses

Supplementary Information


Jumper
2nd Accessories pins
Place Jumper here for 2nd Accessories output
2nd Ignition pins
Place Jumper here for 2nd Ignition output
2nd Crank pins
Place Jumper here for 2nd Crank output
JUMPER SETTINGS
(REAR VIEW OF MODULE)

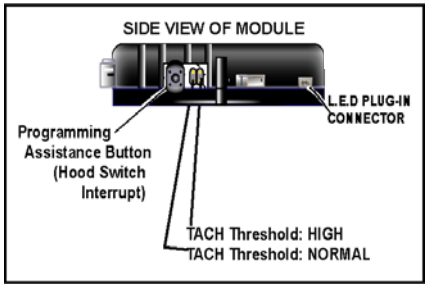
Fifth Relay Output (2nd IGN, ACC or CRANK)

Remote car starters of this series are equipped with an on-board high-current programmable 5th relay that can be used to power a second ignition, accessory or crank wire. The unit uses 3 sets of pins; each set corresponds to a specific function of the output. In order to activate one of the three possible functions, you must place the jumper (supplied) on one of the three sets of pins and connect the 14 AWG wire to the second **IGN. / ACC. / CRANK** wire of the vehicle.

Caution!
Only one set of pins can be used at one time. Using more than one jumper may result in serious damage to the vehicle. The relay output rating on this unit is 25a at most. Defective oem solenoid switches can sometimes draw up to 50 or 60a, causing the 30a fuse to blow. Always verify your circuit with an appropriate measuring device.

Tach jumper settings

Some new vehicles have a higher TACH voltage threshold, which would fall out of the normal TACH trigger circuit of the remote car starter. Changing the jumper to TACH Threshold HIGH will allow the module to properly detect the TACH signal.



Testing

Before putting back the vehicle together, it is recommended to check that the system operates properly. The following testing procedures should be used to verify proper installation and operation of the system. Before testing, make sure that all connections are soldered and that the unit is plugged in.

❑ **If installed on a MANUAL transmission, make sure the system properly enters and exits ready mode:**

Ready mode is a sequence of steps that must be followed in order to allow manual transmission vehicles to be remote started. To get into ready mode:

If Ready Mode is enabled by remote	If Ready Mode is enabled by handbrake
1. Ensure that all the doors, hood and trunk are closed. Make sure that the gear selector is in the neutral position.	
2. With the engine already running, apply the parking brake once and release the brake pedal.	2. With the engine already running, apply the parking brake twice within 10sec. Make sure to release the brake pedal. The parking lights will flash 3 times quickly and remain lit. **Skip to step 4.**
3. Within 20 sec. of engaging the parking brake, press and hold , , **or** on the transmitter. The parking lights will flash 3 times quickly and remain lit.	-
4. Remove the key: the engine will continue running.	
5. Exit the vehicle and close all doors, hood and trunk.	
6. Press for approx. 1 second either: • to lock the doors and shut down the engine; • to unlock the doors and shut down the engine; • to shut down the engine without affecting the doors.	
7. The parking lights will flash twice to confirm ready mode activation.	

FUNCTION 3 - Bypass	
OPTION 1	ADS
OPTION 2*	**Xpresskit**
OPTION 3	Fortin
FUNCTION 4 – Bypass Type	
OPTION 1	One-Way communication
OPTION 2*	**Two-Way communication** (For Xpresskit bypass only)

Bypass

Remote starters of this series have the ability to work in two way mode (D2D) with **Xpresskit** bypass modules. They also offer one way communication with **Xpresskit , ADS** and **Fortin** brand bypass modules.

Note: For Hardware 5.0 and higher, there can only be one bypass connected to the unit.

Virtual Tach System

***** Virtual Tach System combines the latest microcontroller technology and a complex algorithm that took years to develop. VTS is able to effectively monitor the engine starting sequence and release the starter at the right time without physically connecting the tach wire to the remote starter. The VTS constantly monitors the data and readjusts itself automatically in order to maximize its capability to start the engine properly in any weather or deteriorating battery condition *(automatic transmission only).*

Optional Time Delay Adjustment in Virtual Tach System

Follow these steps to program crank time adjustment, if needed:

1. **Enter programming mode** **(see p. 1)** — the parking lights will stay on for up to 20 seconds.
2. Before the lights go out, press and hold the brake pedal and press the **LOCK** and **UNLOCK** buttons simultaneously — the parking lights will flash 4 times. **Do not release the brake pedal. Note:** For vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
   a. Turn the ignition ON; The parking lights will turn OFF
   b. After 4 seconds the parking lights will turn ON and then press the brake.
3. Press the **LOCK** button if you wish to increase the time delay or the **UNLOCK** button if you want to decrease it. **The time delay will be increased or decreased by 50ms. and the parking lights will flash once every time the LOCK or UNLOCK button is pressed.**
4. Press the **TRUNK** button to save the settings you have entered.
5. Release the brake pedal – the time delay programming is now complete.

Multi-speed Tach Programming

1) Enter programming mode (see p. 1) — the parking lights will stay on for up to 20 seconds.
2) Before the lights go out, press and hold the brake pedal and press the LOCK and UNLOCK buttons simultaneously — the Parking lights will flash 4 times, and then the siren or horn will chirp 4 times. At that point, release the brake pedal. **Note:** For vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
   i) Turn the ignition ON; The parking lights will turn OFF
   ii) After 4 seconds the parking lights will turn ON and then press the brake.
3) Start up the engine and allow the vehicle to reach regular engine idle speed.
4) Once the engine is running at normal idle speed, press the brake pedal and keep it down until you hear the parking lights output click 5 times; the siren will chirp twice.
5) Release the brake pedal —the tach programming is now complete.

Horn Honk Timing adjustment

1) Enter programming mode (see p. 1)
2) Press and hold the brake pedal, then simultaneously press the UNLOCK and sTART/STOP buttons — the horn will chirp 5 times. **Note:** For vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
   i) Turn the ignition ON; The parking lights will turn OFF
   ii) After 4 seconds the parking lights will turn ON and then press the brake.
3) Release the brake pedal.
   i) To change the timing:
   ii) To increase the Horn pulse by 3 ms, press the LOCK button.
   iii) To decrease the pulse by 3 ms, press the UNLOCK button.
   iv) To increase the pulse by 10 ms, press the sTART/ Stop button.
4) To decrease the pulse by 10 ms, press the TRUNK button.
5) To save the new settings: press LOCK and UNLOCK. If 3 chirps are returned, the new settings have been saved.

OPTION 3	7/10-sec. lock pulse and two ¼ -sec. unlock pulses
OPTION 4	1/10-sec. lock/unlock pulses
FUNCTION 5 – LED flashing	
OPTION 1*	**ENABLED (without starter kill → will flash only when ignition is OFF)**
OPTION 2	**DISABLED**
OPTION 3	**ENABLED** (with starter kill → will **ONLY** flash when the starter kill engages. This option should be selected **ONLY** if the starter kill is installed.)

MODE 2 ** INDICATES DEFAULT SETTING*

FUNCTION 1 – Safe Start	
OPTION 1	Safe start **ENABLED**
OPTION 2*	**Safe start DISABLED**
OPTION 3	"Swap Start" – enhanced safe start mode with extended safety: To start the engine: press the **PANIC/AUX** then **LOCK** buttons To trigger **AUX 2**: press the **START/STOP** button
FUNCTION 2 – Engine Run Time	
OPTION 1	Run Time = 3 minutes in **gas** mode / 8 minutes **diesel** mode
OPTION 2*	**Run Time = 15 minutes in gas mode / 20 minutes diesel mode**
OPTION 3	Run Time = 25 minutes in **gas** mode / 30 minutes **diesel** mode
FUNCTION 3 – Idle Mode & Turbo Mode (auto) / Turbo Mode (manual)	
OPTION 1	Idle mode & turbo mode **DISABLED (AUTO)** / turbo mode **DISABLED (MANUAL)**
OPTION 2*	**Idle mode & turbo mode ENABLED (AUTO) / turbo mode DISABLED (MANUAL)**
OPTION 3	Idle mode & turbo mode **ENABLED (AUTO)** / turbo mode **ENABLED (MANUAL)**
FUNCTION 4 – Engine type and Cold Weather Mode	
OPTION 1	Diesel mode with 20-minute run time in cold weather mode (30-sec. wait to start delay)
OPTION 2*	**Gas mode with 3-minute run time in cold weather mode**
OPTION 3	Diesel mode with 8-minute run time in cold weather mode (18-sec. wait to start delay)
OPTION 4	Diesel mode with 8-minute run time in cold weather mode (7-sec. wait to start delay)
FUNCTION 5 – Ignition valet	
OPTION 1	Ignition valet – **DISABLED**
OPTION 2*	**Ignition valet – ENABLED**

MODE 3 ** INDICATES DEFAULT SETTING*

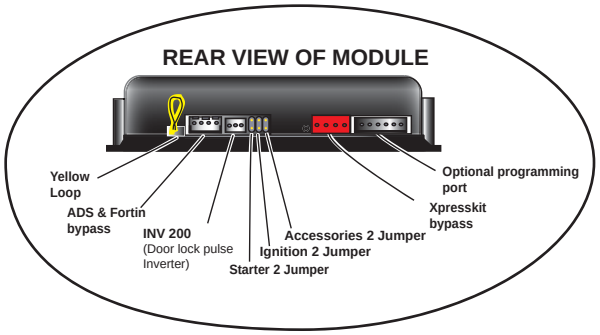
FUNCTION 1 – AUX 1 Programming	
OPTION 1	Horn confirmation upon the 2nd press of the **LOCK** button.
OPTION 2*	**Priority door access**
OPTION 3	Horn confirmation upon the 1st press of the **LOCK** button.
FUNCTION 2 – AUX 2 Programming	
OPTION 1	Constant output by pressing **PANIC** then **LOCK** buttons / constant lock or unlock output if **LOCK** or **UNLOCK** button is pressed for more than 3 sec.
OPTION 2*	**Toggle ON/OFF (with 30-second timeout) by pressing PANIC then LOCK buttons**
OPTION 3	4-minute toggle by pressing **PANIC** then **LOCK** buttons (active only when running under remote start)
OPTION 4	Priority door access
FUNCTION 3 – AUX 3 Programming	
OPTION 1	1-sec. output when **TRUNK** button is pressed for 3 sec. with ignition **OFF** or under remote run
OPTION 2*	**Constant output while the TRUNK button is pressed**
OPTION 3	Disarm/rearm pulse with **TRUNK**
FUNCTION 4 – External Trigger	
OPTION 1	Zone 3 disarm/rearm (trunk pin: a disarm pulse is sent before the trunk opens, the vehicle rearms 4 seconds after the trunk is closed)
OPTION 2*	**Key sense**
OPTION 3	Engine start / stop
OPTION 4	Pager

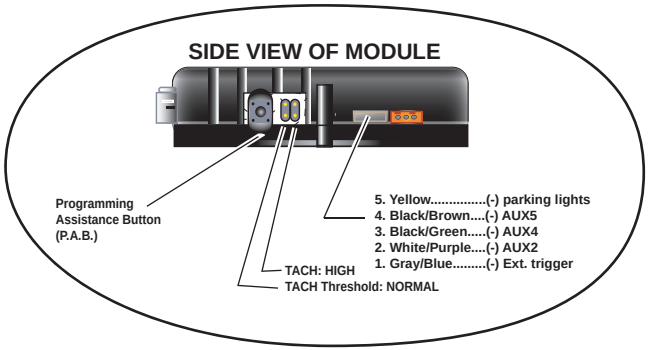
MODE 4 ** INDICATES DEFAULT SETTING*

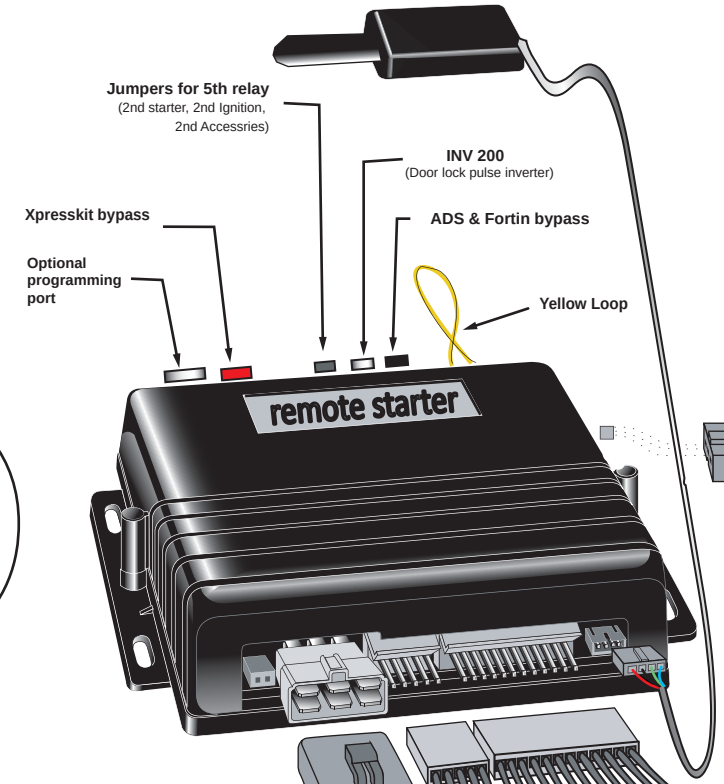
FUNCTION 1 – Multi-Level Features	
OPTION 1	Multi-car Features, Basic Features, Customized Features
OPTION 2*	**Basic Features, Multi-car Features, Customized Features**
OPTION 3	Customized Features, Multi-car Features, Basic Features
OPTION 4	Basic Features, Customized Features, Multi-car Features
FUNCTION 2 – Alarm Control	
OPTION 1	**ENABLED** (**HORN** option must be enabled)
OPTION 2*	**DISABLED**
FUNCTION 3 – Ready Mode Option	
OPTION 1	Enabled by handbrake
OPTION 2*	**Enabled by remote**

WIRING SCHEMATIC

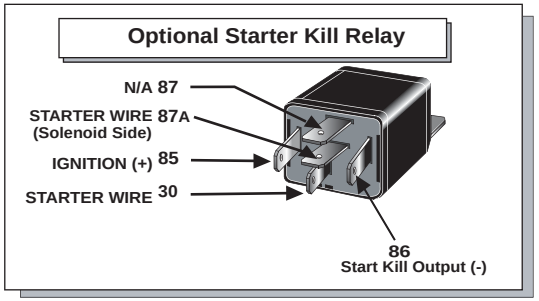
For Automatic transmission:
Cut the yellow loop before plugging the module.







5. Yellow.....(-) parking lights output
4. Black/Brown.....(-) AUX5 output (right sliding door)
3. Black/Green.....(-) AUX4 output (left sliding door)
2. White/Purple.....(-) AUX2 output
1. Gray/Blue.....(-) External trigger input



YELLOW ..... IGNITION
RED .....12V (Battery)
ORANGE...ACCESSORIES
(Heater Blower Motor)
PURPLE..... STARTER
GREEN ..... 5th RELAY

RED .....+12V (Battery)

1- BLACK ..... GROUND (–)
2- PURPLE..... TACH (AC)
3- GREY..... HOOD SWITCH (–)
4- ORANGE ..... BRAKE SWITCH (+)
5- YELLOW ..... PARKIN LIGHTS (+)

12- YELLOW ..... (+) Glow plug input
11- GREY ..... (–) NEG. Door input
10- WHITE ..... (–) GROUND when running
9- PURPLE ..... (–) AUX1output
8- ORANGE ..... (–) Parking Brakes input
7- WHITE/ORANGE ..... (–) Starter kill output
6- BLUE/WHITE ..... (+) POS. Door input
5- WHITE/GREEN ..... (–) DISARM output
4- WHITE/BROWN ..... (–) REARM output
3- GREEN ..... (–) UNLOCK output
2- BROWN ..... (–) LOCK output
1- BLUE ..... (–) TRUNK output